NC/QC/YPD/2020-21/UGD-C1 **Date: 04-06-2020**

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Improvements to UGD works in ward no. 07.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Ramesh. U, Bangalore.

PHYSICAL TESTS ON CEMENT

Grade * : 53,
Type * : O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	**154 min**	Shall not be less than 30 min
2	Final setting time	**270 min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**1.94 %**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**1.86 mm**	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results)	**28.64 N/Sq mm**	Shall not be less than 27 N/Sqmm

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NC/QC/YPD/2020-21/UGD-FA1 **Date: 04-06-2020**

1. TESTING OF FINE AGGREGATES :

Sub: Testing of Fine Aggregates.
{Project*: Improvements to UGD works in ward no. 07.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Ramesh. U, Bangalore.

TABLE - 1.1 : SIEVE ANALYSIS :

IS Sieve Size,mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -II	
04.75	**98.15**	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	**83.40**	60-95	75-100	85-100	
01.18	**70.55**	30-70	55-90	75-100	
600. mic	**46.80**	15.34	35-59	60-79	
300.mic	**22.35**	5-20	8-30	12-40	
150.mic	**8.10**	0-10	0-10	0-10	

TABLE 1.2 ;

Sl No	Test Conducted	Sample	Results	**Requirements** as Per IS. Specification IS :383-1970 (Reaffirmed 2002)
1	Bulking of Sand	001	**17.62 %**	-----
2	Silt Content	----	**0.57%**	Not more than 8%
3	Specific Gravity	----	**2.61**	-------

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NC/QC/YPD/2020-21/UGD-CA1

Date: 04-06-2020

1. TESTING OF COARSE AGGREGATES (20 mm):

Sub: Testing of Construction Materials.
{Project*: Improvements to UGD works in ward no. 07.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Ramesh. U, Bangalore.

Table - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2002) % Passing	
	20 mm Sample	Single size	Graded
40 mm	100.00	100.00	100.00
20 mm	96.85	85-100	90 - 100
10 mm	47.30	0 - 20	25 - 55
4.75 mm	3.90	0 - 5	0 - 10

TABLE 1.2 :

SL No	Test conducted	Results	Requirements as per IS:383-1970 & Tests Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2002)
1.	Flakiness Index	26.57 %	Not to exceed 25 %
2.	Crushing value	28.79%	Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces

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NC/QC/YPD/2020-21/UGD-B1 **Date: 04-06-2020**

1. TEST REPORT ON BRICKS:

Sub: Testing of Bricks.
{Project*: Improvements to UGD works in ward no. 07.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Ramesh. U, Bangalore.

I.WATER ABSORPTION TEST:

Sl No	Brand Name	Water absorption %	Average value %	Normal Values
1	Sample-I	11.10	**10.84 %**	As per IS:1077-1992 water absorption shall not be more than 20.00%
2	Sample-II	11.06		
3	Sample-III	10.95		
4	Sample-IV	10.07		
5	Sample-V	11.03		

II. COMPRESSIVE STRENGTH :

Sl No	Brand Name	Compressive Strength N/Sq.mm	Average value N/Sq.mm	Normal Values
1	Sample-I	5.40	**5.63**	---------
2	Sample-II	5.50		
3	Sample-III	5.85		
4	Sample-IV	5.75		
5	Sample-V	5.65		

III. EFFLORSCENCE:

Sl No	Brand	Efflorescence	Explanation as per IS: 3495:1992(Part-II)
1	Sample-I	Nil	Not more than 10 % of the exposed area of the brick is covered with a thin deposit of salts.
2	Sample-II	Nil	
3	Sample-III	Nil	
4	Sample-IV	Nil	
5	Sample-V	Nil	

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NC/QC/YPD/2020-21/UGD-C2

Date: 08-06-2020

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Improvements to UGD works in ward no. 07.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Ramesh. U, Bangalore.

PHYSICAL TESTS ON CEMENT

Grade * : 53,
Type * : O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	**162 min**	Shall not be less than 30 min
2	Final setting time	**270 min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**2.19%**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**2.06mm**	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results)	**28.76 N/Sq mm**	Shall not be less than 27 N/Sqmm

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NC/QC/YPD/2020-21/UGD-PCC1

Date: 08-06-2020

1. TESTING OF COARSE AND FINE AGGREGATES:

Sub: Testing of Coarse and Fine aggregates to be used for bed concrete.
{Project*: Improvements to UGD works in ward no. 07.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Ramesh. U, Bangalore.

1. COARSE AGGRGATES TABLE - SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2007) % Passing	
	40 mm Sample	Single size	Graded
40mm	100.00	85-100	90 – 100
20mm	63.70	0 -20	30- 70
10mm	31.45	0 -5	10- 35
4.75mm	4.15	------	0- 5

2. FINE AGGREGATES TABLE - SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -III	
04.75	97.45	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	83.15	60-95	75-100	85-100	
01.18	71.05	30-70	55-90	75-100	
600.mic	47.80	15-34	35-59	60-79	
300.mic	23.10	5-20	8-30	12-40	
150.mic	7.90	0-10	0-10	0-10	

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NC/QC/YPD/2020-21/UGD-CB1 **Date: 22-06-2020**

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).
{Project*: Improvements to UGD works in ward no. 07.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Ramesh. U, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{30}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	15-06-20	22-06-20	07	22500	515	22.89	**23.41**
	002	"	"	"	"	540	24.00	
	003	"	"	"	"	525	23.33	

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NC/QC/YPD/2020-21/UGD-CB2 **Date: 22-06-2020**

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).
{Project*: Improvements to UGD works in ward no. 07.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Ramesh. U, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M_{30}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	15-06-20	22-06-20	07	22500	530	23.56	**23.70**
	002	"	"	"	"	525	23.33	
	003	"	"	"	"	545	24.22	

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NC/QC/YPD/2020-21/UGD-CB1A

Date: 13-07-2020

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).
{Project*: Improvements to UGD works in ward no. 07.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Ramesh. U, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{30}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	15-06-20	13-07-20	28	22500	740	32.89	**32.44**
	002	"	"	"	"	730	32.44	
	003	"	"	"	"	720	32.00	

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NC/QC/YPD/2020-21/UGD-CB2A

Date: 13-07-2020

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).
{Project*: Improvements to UGD works in ward no. 07.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
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Name of the Agency/Contractor*: Ramesh. U, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M_{30}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	15-06-20	13-07-20	28	22500	730	32.44	**32.81**
	002	"	"	"	"	745	33.11	
	003	"	"	"	"	740	32.89	

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